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Dynamic Strength of Molybdenum Approaching Melt Conditions GEREMY KLEISER, LALIT CHHABILDAS, Air Force Research Laboratory, WILLIAM REINHART, Sandia National Laboratories, WILLIAM ANDERSON, Los Alamos National Laboratory — The purpose of this study is to investigate the dynamic strength of molybdenum at high pressures as it approaches melt. Symmetric impact experiments were conducted using a two-stage gas gun and VISAR diagnostic system to examine the molybdenum behavior up to pressures of 3.5 Mbar. The approach required compensating for the wave interaction occurring due to the low impedance LiF window, but provided detailed information regarding the release behavior from the Hugoniot state. This paper describes the strategy, experimental method, and corresponding results which are used to draw conclusions about the dynamic behavior of molybdenum at high pressure.

Jeremy Kleiser
Air Force Research Laboratory

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